

## Analysis of space and housing based on the new considerations derived from the COVID-19 pandemic. An approach to housing in Mazatlan, Sin. Mexico



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### ABSTRACT

This document examines the minimum housing characteristics that must be reconsidered to address emerging needs from the health crisis derived from the COVID-19 virus pandemic. Since the needs of society are constantly evolving, it is important to re-evaluate the minimum requirements for adequate housing. As people's lifestyles and family structures change, so do their housing expectations. In the present investigation, some of the issues that make the revaluation of the house necessary are enunciated.

**Keywords:** Housing, COVID-19.

## 1 INTRODUCTION

Housing is a basic need that has been present at all stages of human evolution. The need for shelter and shelter has driven the development of various housing systems. The habitability and functionality of these systems are crucial to providing adequate accommodation. In recent times, there has been an increased focus on developing sustainable housing options to reduce the negative impact of housing on the environment.

During the health crisis caused by COVID-19, housing returns to take the character of refuge, unique and safe in the face of the events generated, housing acquires a new leading role within the activities of the human being, in this way it becomes the center of development of activities such as coexistence, leisure, work, shopping, etc., for all the inhabitants of the house.

Recent changes in daily activities have highlighted the importance of assessing the functionality of living spaces. With the added emphasis on remote work and virtual communication, it is necessary to ask whether the minimum housing requirements are sufficient for modern life. In this regard, the efficiency and flexibility of living spaces are now being examined more than ever. As we navigate this new normal, sustainable housing options must be not only functional and livable but also adaptable to meet the changing needs of individuals and families.

The minimum characteristics of the house must be rethought to solve the new needs that arise. With the ever-changing needs of our society, it is necessary to reassess the minimum requirements for

adequate housing. One of the solutions could be to address the issue of overexploitation of common areas such as living rooms, studies, etc. By establishing and using functional areas, we not only solve the problem of overcrowding but also improve the overall living experience of the occupants. This is especially important in times like the COVID-19 pandemic, where spending long periods at home was established as the norm.

## **2 THE CONCEPT OF HOUSING**

The Royal Spanish Academy defines housing as a Protected place or construction conditioned for people to live. Heidegger for his part expresses a broad concept of "inhabiting" exposed, encompasses the totality of our earthly permanence as "mortals of the earth" that we are. In this way, thought can go beyond simply building and, with it, inhabiting acquires a higher and transcendent dimension. (2015) (Heidegger, 2015)

For Marx, housing arises as a response to the growth of production levels and highlights the concept of "Social Engineering". This theory establishes the contribution of buildings capable of housing the working workforce, necessary to move the industrial production apparatus. It is important to understand that housing is not only a place to live, but it is also a tool for economic production and society as a whole.

The design and construction of housing must take into account not only functionality and habitability but also the contribution to the overall socio-economic structure, as discussed in the work "Contribution to the housing problem" by Frederick Engels. (Engels, 1987)

In recent years it is considered necessary to reformulate the concept of housing, establishing how it is being transformed and acquiring a new meaning, both at the cognitive level and in terms of significance, derived from the new requirements marked by the COVID-19 pandemic. Housing is not only a physical space to live but has taken on an important role as a place of work, education and entertainment. In addition, the importance of accessibility and connectivity within housing has become crucial to enable remote work and learning. Addressing this transformation in housing is critical to ensure it remains a safe and comfortable haven for the people who inhabit it.

The COVID-19 pandemic has disrupted society, altering social dynamics and interactions with the world around us. To adapt to these changes, resilience is critical. Measures must be taken to ensure the safety and well-being of individuals and families. This includes innovative housing options that prioritize functionality, sustainability and adaptability to changing circumstances.

The perception of housing and daily activities within households are changing and generating modifications within people's lifestyles. It is necessary to redesign the house and the perception of this in the face of these new requirements.

### 3 THE MINIMUM HOUSING

For several decades there has been a constant debate that marks the urgency of establishing and where appropriate reconsidering the minimum space per person required, this space must have at least the minimum measures necessary for the inhabitants to carry out their daily activities corresponding to hygiene, safety, health, accessibility, safe and stable supplies and comfort, comfortably and comfortably. In this regard, regulations must be put in place to ensure that housing is livable and safe for all, regardless of their economic and social circumstances. Public policies that promote the construction of sustainable and affordable housing, as well as the implementation of protection systems for the most vulnerable households, should be considered. This will allow housing to remain a safe and comfortable haven for people, today and forever.

In this sense, the minimum dimensions of the house acquire a new meaning, since in many cases, especially within large cities, the institution of minimum spaces, constituted as bedrooms, consumed much of the day of the resident. The COVID-19 pandemic has shown how important adequate and safe housing is, beyond its function as simple shelter. It is therefore imperative that attention be paid to factors such as ventilation, natural lighting, workspace and access to technology in the conceptualization and construction of homes of the future. Housing should be considered as a flexible space that can adapt to the changing needs of people, without compromising their well-being and quality of life.

When the pandemic appeared, it was established that these spaces were not enough, since the house must now serve for a greater number of functions, which were not contemplated within its original design. New rituals are established within homes such as disinfection upon entering the home, hygiene and change of clothes. Another indicator of resilience has been household internet access. Classes, teleworking and online health control have measured the ability of families to adapt to change, generating stress and anxiety in many cases, also affecting health.

Ensuring adequate housing for all people involves more than providing shelter. Minimum conditions of habitability must be met, including access to basic services such as water, electricity and drainage, as well as durable and affordable materials. In addition, housing accessibility should be considered, paying attention to compliance with building codes and standards. In addition to these factors, it is essential to ensure that the house is not in poor condition and does not require major repairs to be habitable.

Location is also a crucial aspect to consider when designing sustainable housing options. A dwelling should not be located near toxic waste or other hazardous materials that may negatively impact the health of its inhabitants. The housing establishment should also take into account potential hazards, such as flood-prone areas, to reduce the risk of damage and displacement. In addition,

dwelling should not be located along high-traffic areas, such as railways or highways, that may disturb the peace and security of the inhabitants, within an ideal state these should be the minimum requirements with which a living space must meet.

In Board 1 the minimum spaces for housing are established, contemplated in several regions of Latin America, as recorded in the regulations and building codes of the different countries.

Board 1 Characteristic of minimum housing for different countries

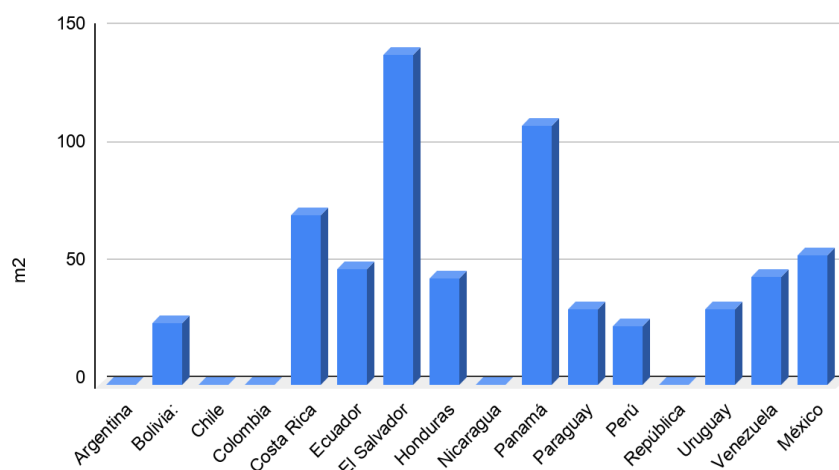
Country	Building Code	Minimum Sizing
Argentina	Argentine Building Code	The minimum number of spaces within a social housing (living room, dining room, kitchen and bedroom) and is determined by the inhabitants of the house
Bolivia:	Bolivian Construction Regulations	Single-family homes with a minimum of 26 m <sup>2</sup> and 36 to 54 m <sup>2</sup> for progressive social housing.
Chile	Ministry of Housing and Urban Planning	The regulation dictates requirements per enclosure based on the minimum furniture necessary for habitability depending on the type of space (bedrooms, living-dining room, kitchen, bathroom, loggia, circulations) and complementary furniture (closets, stairs and doors).
Colombia	These are determined from a human rights perspective	The technical assistance guide for quality in social interest housing is based on decree 1468 of 2019 which stipulates the different aspects by premises within the homes and depending on the climates in which it is located (cold, temperate, hot dry and warm humid climates).
Costa Rica	The regulation of subdivisions and urbanizations of the National Institute of Housing and Urbanism (INVU)	Article 94 defines the minimum area and front of lots of residential complexes and their provisions and according to the levels, being the minimum of one level in 72 m <sup>2</sup> with a front of 6 m.
Ecuador	The Minimum Guidelines for Registration and Validation of Housing Typologies of the Ministry of Urban Development and Housing	Minimum requirements that dwellings in a minimum area of 49 m <sup>2</sup> must have.
El Salvador	Regulatory framework for the Single Window in the minimum requirements of urban planning and construction	The minimum size of the lots is based on their slope, being the smallest (corresponding to a slope of up to 15%) of 140 m <sup>2</sup> .
Honduras	La Gaceta, the official newspaper of the Republic of Honduras	The normative parameters give a minimum lot area for individual housing of 45 m <sup>2</sup> corresponding to a front 3.5 m.
Nicaragua	The Nicaraguan Mandatory Technical Standard NTON 11 013-04	The housing area will correspond to what determines the land occupation factor
Panama	Executive Decree No. 54 of 18/07/2009 of the Ministry of Housing	The minimum area is determined per lot, corresponding to 110 m <sup>2</sup> for single-family housing, with a minimum front of 7.5 m
Paraguay	Ordinance No. 241/05 of the Municipal Board of Asunción	Homes within 32 m <sup>2</sup> must have basic environments of a bedroom, kitchen, dining room, living room, and bathroom.
Peru	Housing Standard A.020 in Article 8	At least one roofed area of 25 m <sup>2</sup> with expandability and 40 m <sup>2</sup>
Dominican Republic	Provisional recommendations for minimum spaces in urban housing M-016 of the Secretary of State for Public Works and Communications	The ranges of values vary according to the number of people living in the house, the activities and the furniture in each type of space.
Uruguay	Article 18 of Chapter III of Law 13.728	The living area of a dwelling is greater than 32 m <sup>2</sup> . This minimum will apply to dwellings that have one bedroom. For each additional bedroom, the minimum will be increased by 12 m <sup>2</sup> .

Venezuela	In the Report of Design and construction guidelines for Housing and new developments of the Venezuelan Chamber of Construction	Master bedroom 10 m <sup>2</sup> , secondary bedroom 8 m <sup>2</sup> , laundry kitchen 10 m <sup>2</sup> and dining room 18 m <sup>2</sup> .
Mexico	National Housing Commission	The minimum habitable for a house is 55 m <sup>2</sup>

Ensuring a home is livable and functional involves more than simply meeting basic building standards. Even when spaces have been standardized according to different regulations, they may still not be sufficient to meet the minimum requirements for hygiene, safety, health, accessibility, reliable supply and comfort. As such, it is vital to consider additional factors and prioritize the needs of the individuals and families who will reside in the household. By doing so, we can create sustainable and comfortable housing solutions that truly meet the needs of different communities.

Even when the spaces are standardized in the different regulations, they often fail to be sufficient to meet the minimum requirements of hygiene, safety, health, accessibility, and comfort, in Figure 1 The square meters of minimum housing for different countries are graphically shown.

Figure 1. Minimum housing in square meters



As the COVID-19 pandemic continues to affect the way people live and work, it has become increasingly important to develop housing that is tailored to the unique needs of individuals and families. Some of the measures proposed to generate greater comfort during the pandemic include the creation of soundproof cubicles or offices for videoconferencing, the use of paints resistant to disinfection techniques and the implementation of thermal and acoustic insulation elements. In addition, improving energy efficiency can reduce the negative impact of housing on the environment while ensuring that housing is affordable and sustainable for future generations. These measures are established in response to the requirements established by the pandemic.

By incorporating these measures into the design and construction of new housing, we can create housing solutions that promote health, well-being in the different regions where housing is located.

#### **4 SOCIAL HOUSING IN MAZATLAN, ARCHITECTURAL MORPHOLOGY**

To perform an analysis of housing in Mazatlan it is necessary to consider the wide range of options, there are multiple classifications where each of the types of housing can be classified, the main classifications according to INEGI are those listed below: precarious housing, traditional housing, improved housing, social interest housing and medium interest and residential housing. With this diversity of housing, it becomes evident the need to have well-structured housing policies focused on the quality of life of the inhabitants, taking into account factors such as location, accessibility, services and security in the area. By doing so, adequate housing for all can be ensured.

When generating functional and comfortable spaces, several key factors must be taken into account, such as the size and orientation of the house, as well as the materials used in the construction, which play an important role in determining the habitability and sustainability of the house. In addition, it is essential to incorporate elements that promote greater comfort within the living space, such as natural ventilation, adequate lighting and insulation. By prioritizing these factors in the design and construction process, we can create homes that truly meet the needs of the occupants.

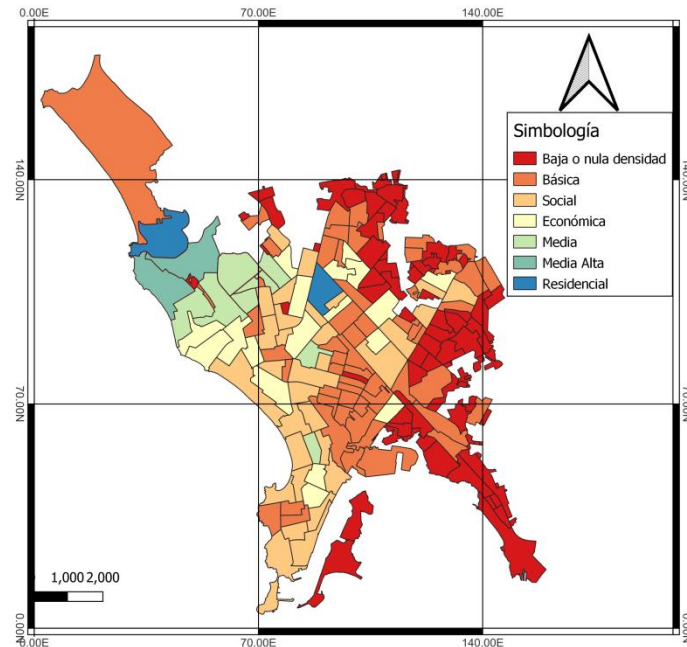
INFONAVIT defines social housing as affordable housing that is intended for low-income people and workers who must have at least 3.9 monthly salaries. The importance of social housing is that it provides an affordable housing alternative to vulnerable groups who would otherwise have difficulty obtaining adequate housing. In addition, these homes play a crucial role in reducing Mexico's housing deficit and strengthening the social fabric of communities. The housing to which the workers will be entitled, is minimum housing, which has the minimum spaces required and whose value does not exceed 118 VSM (times the minimum wage), therefore depending on each region, the size of the house may vary, since it depends mainly on the surplus value of the region as well as the cost of operation during its operation. Based on the previous definition, the housing to be studied will not exceed 118 VSM and its operating cost does not exceed 20% of 3.9 VSM.

In this type of social housing, it is ensured that the minimum requirements of habitability are met, in addition to having the necessary public order services, such as drinking water, electricity, drainage and garbage collection service; You may count items like air conditioning.

According to the different classifications of housing in Mazatlan, it is important to highlight the prevalence of basic, social and economic housing in the area, as can be seen in Figure 2, according to the analysis carried out this type of structure represents 86.7% of the total housing in Mazatlan. Since this type of building corresponds to structures with limited spaces, it is necessary to carry out an analysis

that involves functionality in the face of the requirements imposed by the pandemic derived from COVID-19, this topic is addressed in detail within the following section.

Figure 2. Distribution by type of housing in Mazatlan.



The geo-referenced map of Figure 1 graphically shows the distribution of each type of housing in Mazatlan, the map shows the types of buildings that occur more periodically, in this sense the basic, social and economic housing, are the type of building that is built most frequently. Continuing with this observation, it is important to note that to have a better impact on housing design at the regional level, in basic social and economic housing, specific designs and regulations must be available that allow significant changes within this type of property, since positive changes within these types of buildings, They can have important impacts at the regional level, given the frequency with which these types of structures occur.

Innovation in housing design is an opportunity to transform and improve housing patterns. The implementation of health security measures in the design of new homes, as well as the rehabilitation of existing ones, will contribute to greater resilience and a better quality of life for the inhabitants.

## 5 PRACTICED SPACE. HOUSING AND HEALTH

Throughout the history of humanity, man has experienced health crises on several occasions that have forced him to generate changes in the way of thinking and acting, these changes have been developed as countermeasures to the effects that generate damage, the current pandemic is not the practical exception. Given the new requirements of living spaces, buildings must be modified to solve

the pressing circumstances. In this sense we can emphasize that before the needs that arise it is necessary to redesign the living space. Living spaces must be transformed to solve the pressing circumstances, as a response to the needs of the user.

An example of how public space and housing were modified in the face of health crises is the one detailed by Alejandro Hernández Gálvez (Gálvez, 2020) where he describes how architecture responded to the pandemic in this case caused by Cholera. At that time, architects developed homes that featured patios and higher ceilings to improve ventilation and natural light in. Hygiene measures such as separate bathrooms and sinks were also implemented in each room.

Within the reference, the crisis is described as: (Gálvez, 2020)

*"What left an indelible impression on my spirit was the terrible invasion of cholera in that year. The silent and deserted streets in which the hasty footsteps of someone who ran for help resounded at a distance; the yellow, black and white banners that served as a warning of the disease, of doctors, priests and houses of charity; the crowded apothecaries; the temples with the doors wide open with a thousand lights on the altars, the people kneeling with their arms crossed and shedding tears."*

During the cholera pandemic in Mexico, access to adequate and safe housing became even more crucial to prevent the spread of the disease. In addition to the infection control measures mentioned above, people needed to have a safe place to shelter and prevent the spread of the virus.

During the cholera pandemic in Mexico, extreme measures were taken to prevent further infections. According to an account by Prieto, in the reference "Cholera in real time. A rereading of The Rosary Cholera Epidemic of 1894-95" describes that some foods, including stuffed chili peppers, were banned and houses were fumigated with vinegar and chloride to prevent the spread of the disease. Within the same reference it is described that at that time a Municipal Board of Health was established that took action to protect the community efficiently and effectively. (Prieto, 2020)

The cholera pandemic in Mexico in 1833 was a great step to implement sanitary measures and improve the living conditions of the population. Velasco in reference "The cholera epidemic of 1833 and mortality in Mexico City" highlights the importance of the introduction of drainage, sewage and drinking water, the construction of pipes and sanitary facilities. These measures made it possible to improve the quality of life of the inhabitants and prevent future epidemics. (Velasco, 1992)

Among the lessons learned in the cholera pandemic of 1833, the importance of collaboration between administrations, scientists, public health experts, architects, urban planners, sociologists, sectoral panels, neighborhood communities and associations is insisted on the importance of collaboration between administrations, scientists, public health experts, architects, urban planners, sociologists, to prevent the spread of infectious diseases. As Velasco highlights in his 1992 reference,



measures taken to improve sanitary conditions, such as the introduction of drainage, sewage and drinking water, were crucial to controlling the spread of cholera. The cholera pandemic of 1833 represents an important lesson for sustainable development and investment in health infrastructure, as these advances are necessary to ensure the long-term safety and well-being of communities in health emergencies. (Velasco, 1992)

During the current pandemic, housing has taken on a singular significance as a home and shelter. Faced with the need to spend more time at home, society has undergone a transformation in the way spaces are used and the importance given to them. In addition, COVID-19 has highlighted the need for adequate, sustainable and healthy housing that promotes people's quality of life. In this sense, it is necessary to rethink architecture and cities to adapt to the new needs of society in this context of pandemic and the future.

Without a doubt, you prioritized the generation of new changes and ways of thinking within urban design and architecture. The challenge is to generate these changes efficiently and effectively to solve as soon as possible the challenges that arise from different perspectives. In this sense, it is important to highlight the need to promote, on the one hand, the implementation of sustainable technologies and the use of ecological materials in the construction of housing and, on the other hand, to guarantee the health, comfort and well-being of the inhabitants of the house, to solve efficiently and effectively the challenges that arise.

The objective since the beginning of time is to create buildings that protect the occupants from inclement weather and predators, the new challenge is to create sustainable, affordable buildings that are also safe in the face of public health crises. Generating in the same way not only safe housing, but also safe and healthy cities.

Architecture has always been influenced not only by art, but also by science. In the era of Braque's cubism and Mondrian's neoplasticism, it is established that positive science also had an impact on architecture's orientation towards sanitation, antiseptics, heliotherapy, as well as other aspects of medicine. (Sato, 2020)

Today, the importance of health and safety in architecture and urban planning is more evident than ever. These civilizational advances have led to the need to revise the principles of urbanism and architecture to ensure the welfare of society. It has been claimed that modern urbanism began in the nineteenth century thanks to the intervention of doctors and their hygiene measures. (Sato, 2020)

Another example of the adaptation of architecture to health requirements, is exemplified in the records made in 1857 by the Doctor Juan Bruner on the poor conditions of popular housing in Chile establishing that the health of a people depends on the place where it lives, topography, material life and customs, which would constitute a challenge for architecture. Bruner not only documented the

unsanitary conditions of the dwellings, but also proposed architectural solutions to improve the quality of life of the inhabitants. This historical example highlights the importance of collaboration between science, architecture and medicine in sustainable housing development. Architectural and building professionals need to consider these principles to develop housing that protects public health and ensures long-term safety and well-being.(Bassa M. & Fuster S., 2013)

This scientific approach has become even more relevant in the current situation of the COVID-19 pandemic and the need to develop sustainable, healthy and safe housing that promotes people's quality of life. In this sense, sustainable architecture is not only a matter of aesthetics, but also of science and health. The current pandemic has highlighted the need to consider public health in urban planning and architectural design to ensure a safe and healthy future for all.

## **6 CHANGE IN CITIES**

The coronavirus has already generated radical changes the way of acting and seeing the city the changes have been transcendent and irreversible, the pandemic has managed to show the vulnerability we have in crises, health requirements must be met and give new solutions to the dimension of the problem. Urban dimensionality takes on a new significance.

The city demands from its inhabitants the reduction of transfers, a greater distance between people, and in general more prudent alternatives, where contact and closeness with people other than the family nucleus is avoided in the best way.

Now social networks replace the need for socialization and contact with the environment, a paradigm shift is established that leads to a change in thinking and the way of seeing and living the city and the environment. Overcoming a contingency that is already historic depends to a large extent on this adaptation. Social networks, the internet, the telephone, take a capital importance in the maintenance of news and progress, in the exercise of solidarity and mutual help.

Social interaction, and with the city now becoming virtual, the urban space acquires a new dimension within the environment and is replaced by poor substitutions, generated within a shelter inside the house.

Within the following section, a more in-depth analysis of what the replacement of face-to-face social interaction by virtual social interaction represents.

## **7 REPLACING SOCIAL INTERACTION**

As it is already well known and also disseminated by several media, confinement is one of the main weapons to prevent the spread of the Coronavirus, however the effects triggered by this confinement are still being studied. One of the main problems triggered by the shelter is the

replacement of social interaction, now through electronic means. No doubt the answer is still uncertain, however entrepreneurs related to communication networks by electronic means, take this opportunity as a business opportunity with a performance undoubtedly quite lucrative.

Entrepreneurs like Marc Zuckerberg affirm that "Connecting people around the world is the most important thing", but is a connection achieved?, in this sense other entrepreneurs who have been venturing into the market of technology, applications and social networks. However, it is not until confinement that most of the population has been forced to have social interrelationships by electronic means. And this is happening all over the world. Activities such as studying, shopping, drinking, exercising, meditating, working, going to the museum or a concert, sharing with your friends, family or neighbors, are daily activities that it was impossible to imagine the realization of these by virtual means, and yet they no longer happen in schools, museums, amphitheatres, shopping malls, discos, gyms or chapels, but have been teleported to the virtual world, where we will be safe from being infected.

During this pandemic the use of the internet increased historically, however this represents a very dangerous gap, since on the one hand some people can have access to education by digital means, and we forget about people who for some reason do not have or have access to the internet, This can harm their training.

For people with internet access, platforms such as Zoom, Microsoft and Google are trying to cope with the growing demand from users who now do homeoffice, telecommuting or remote work while providing their software for free, but hoping for a paid subscription, in exchange for unlimited calls. Companies like Microsoft's Team, have increased the number of their calls by up to 700%. The question is: if these means can replace traditional systems?

Virtual overexploitation makes internet systems unsustainable and begin to fail, virtual overpopulation is also present with the delivery applications of food, food and hygiene products, traditional means of consumption are being replaced by online shopping platforms of Walmart, Sears, Mercado libre, Linio and Amazon, are some of the main means of buying and selling in Mexico, these media have reached new records of daily downloads and demand during the health crisis. Systems such as Rappi and Uber have also benefited from the current contingency and are also profiting from this situation, since they have raised the cost of fares.

The electronic link media at the moment are being revalued, and are also classified, within an unwritten classification where media such as Zoom, Microsoft and Google are attended as formal means of communication while there are others such as FaceTime, Skype, or WhatsApp video call that are used as more informal communication systems. Spending time "together" by video call, perhaps can substitute for being truly together?

What happens with the busiest meetings in a not-so-formal environment, applications such as Skypéro or Coronapéro have taken virtual socialization to another level, with the art of partying staying at home, or at least it is how it is intended to advertise. These applications are designed for people who, as happens at real-life parties, between people who know each other well and a couple of strangers make a video call by Skype, Zoom or Messenger. In Spain, Portugal and Italy the HouseParty App has become the most downloaded application for iOS and the fifth in Android. This application offers the same service as others but with a plus of mini-games to share with users in real-time. For a mood of Quarantine and chill, Google Chrome proposes an extension called Netflix Party that allows Netflix users to watch movies in groups and comment on them in real-time.

The human being as a social being needs to live and develop in a group, generating a coexistence with other people, in systems such as Youtube from home everyone shares their knowledge of baking, watercolors, languages, fitness, meditation, mindfulness in an attempt to maintain mental health quarantine is leaving strong teachings, which will undoubtedly go down in history for the aftermath and the lessons derived from it, But undoubtedly it will also go down in history as the moment of the taking of prominence of social networks and the social transformation generated from this.

## **8 THE SICK IMAGINARY**

The imaginary stands out as the ability to represent certain objects in thought and with relative independence of reality, the significance of an element that is common in a group of people can generate a transcendence and importance for decision-making and behaviors within the collective.

In this sense, Castoriadis constructs a theory about the function of imagination in shaping society. It is proposed to make a distinction between the radical imaginary and the conceived imaginary we can affirm that there is a mutual relationship between the historical-social and the meanings. The imaginaries establish a particular way of being of things, first, original and irreducible, in this sense we can raise the idea that nothing exists outside the established concepts of significance; while the social imaginary may have the ability to think of society as a system that constructs itself. In this way society can institute the world as its world and it is in this idea of self-construction of society that the possibility of self-transformation emerges.

Within the conceptualization, constitution and significance, social imaginaries can generate a set of values, appreciations, tastes, ideals and behaviors in the consciousness of the people who make up a certain culture. In this case, imaginaries can be maintained in constant interaction with the individual conception of reality, which stands out as the effect of a complex network of relationships

between discourses and social practices. The constitution of the whole unfolds considering the individual valuations

Another conceptualization that expresses the imagination very closely is the one highlighted by the author Ruth Sautu:(Sautu, 2010)

*"... The social imaginary is composed of a set of global and totalizing representations of a society, where values, beliefs, ideas, symbols and appreciations are integrated to shape the cultural and the symbolic. The imaginaries are established as social meanings that establish order, establish a limit of what can be imagined, thought, desired and acted in a particular historical moment. Through them, a collectivity designates its identity by elaborating a social representation of itself."*

If we ground these concepts to what is currently happening with the pandemic, it may seem paradoxical that we may find ourselves facing the construction of an imagination, which is capable of wrapping and creating a concept about the temporality in which we live.

This imagination may or may not be overvalued concerning reality and yet it affects us directly, in each of our daily activities, the news, the number of deaths, the number of patients, are figures that alarm and create an image of fear within the collective.

But on the other hand authors such as Pablo Lazo describe the effects of the pandemic as follows: (Lazo, 2020)

*"... In the last week Venice's empty canals have given room for ducks, herons and fish to turn. The quality of the water has improved substantially since the irruption of the water transport service has stopped pouring more than 300 liters of dissela daily into the canals. During January and February, air quality in China's major cities improved substantially. Deaths related to diseases linked to air pollution fell by more than 30%. The images show the surprising dissipation of polluting gases in no more than 30 days. In northern Italy, the reduction of nitrogen dioxide emissions (which does not directly generate CO2 emissions), has been 40% during the last three weeks. In Mexico City, according to the Ministry of Mobility, vehicular traffic has decreased 61% in just 7 days."*

While it is true that the constitution of the imaginary can become negative, it is also true that for some environmentalists they can create their imagination to some extent, without any of these being more or less true.

## **9 HOUSING IN MAZATLAN**

The perception of housing in the face of COVID-19 in Mazatlan can be described in three stages. The first occurred during the beginning of the pandemic, where fear and uncertainty led most people to seek refuge in their homes, the pandemic surprised the majority of the population without

prevention measures and with housing that did not meet the basic requirements for a healthy and safe life.

The second stage was characterized by the need to adapt housing to be able to work and study from home, generating a demand for larger spaces and with adequate conditions, in this way the authorities and developers began to take measures to improve the quality of housing and guarantee social distancing.

In the third stage, in the face of the prolongation of the pandemic, the importance of having sustainable and healthy housing has become essential, since this not only guarantees individual but also collective well-being, at this stage citizens are adopting a greater awareness about the importance of safe and sustainable housing, and expect the authorities and developers to continue improving the living conditions of the population throughout the country.

During the research carried out in the city of Mazatlan to know the perspective of people about their housing after the pandemic, several relevant opinions were obtained. One of the main priorities mentioned was the need for sufficient spaces for work and study at home. In addition, the importance of having access to green areas and outdoor spaces to improve quality of life and mental health was emphasized. The need for double-glazed windows to ensure adequate ventilation and reduce outside noise levels was also emphasized.

After conducting interviews with 35 people in different parts of the city of Mazatlan, some interesting answers were obtained regarding the perception of housing during the pandemic. Some opinions agreed on the importance of having private outdoor spaces, such as patios and balconies, to be able to enjoy the outdoors without exposing yourself to crowds. Others stressed the importance of good ventilation and the need for air conditioning to mitigate high temperatures during the summer. In general, the opinions pointed to the relevance of having a comfortable, functional and safe home during these times of uncertainty, some of the answers are stated below:

The pandemic has affected my concept of housing in several ways. Before the pandemic, my home was primarily a place to rest after a long day at work and a space to spend time with my family over the weekend. However, I now feel that it has become a much more important space for my emotional well-being and physical health. I've paid more attention to the air quality and lighting in my home, plus the need to have adequate space to work from home in case of future emergencies.

The pandemic has changed my concept of housing in a significant way. Before, my focus was on aesthetics and comfort, however, the pandemic made me realize the importance of having a safe and healthy space. I now value natural ventilation, proper lighting and access to outdoor spaces much more. In addition, the need to have a place to work and study from home has led to greater attention on the functionality and adaptability of interior spaces.

The COVID-19 pandemic has had a huge impact on my concept of housing. Before the pandemic, my home was simply a place where I lived and spent time with my family, but now it has taken on a new dimension. I realize that the quality, safety and sustainability of my home are fundamental factors for my well-being and that of my family. In addition, the pandemic has highlighted the importance of having adequate space for work and study at home, as well as innovative urban design approaches to ensure the health and well-being of communities.

The pandemic has significantly affected the concept I had about my home. Before the pandemic, I used to see my home primarily as a place to sleep and spend free time. However, after being quarantined in my home for several months, I have come to appreciate much more the comforts of my home and its ability to meet my basic needs. In addition, I have become aware of the importance of having a healthy and safe living space to preserve the health and well-being of my family and me.

The pandemic had a major impact on my perception of my housing. Previously, I saw it primarily as a place to sleep and rest, but after spending so much time at home due to social distancing measures, I realized it's so much more than that. My home became my office, my gym, and my haven. I started paying more attention to air quality and lighting to make sure my home was not only comfortable but also healthy.

## **10 CONCLUSIONS**

As conclusions of this work, it can be established that the COVID-19 pandemic has had a profound impact on the perception and valuation of housing. In this sense, the quality, safety and functionality of housing have emerged as fundamental factors for the well-being and health of people. Likewise, the need for adequate spaces for work and study at home has become evident, as well as innovative urban designs that encourage not only social interaction and access to green areas, but also respond to health needs and requirements.

It can be noted that the pandemic has negatively affected many of the sectors surveyed in Mazatlan since most of the people interviewed mention the discomforts of confinement. Establishing that, the house presents deficiencies in terms of space and levels of comfort for the development of online activities.

In the same way, there is an insufficiency in terms of computer equipment and internet, as well as an increase in energy expenditure and terms of space, people raise the need for an increase in personal space.

In short, the pandemic has posed new challenges and opportunities to rethink the way we understand and inhabit our homes, which invites us to reflect on the importance of building more sustainable and healthy homes.

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